

What is claimed is:

Claim 1. A separation analyzer comprising:

a first pump for transferring liquid, while changing mixing ratios of plural kinds of solutions;

5 a second pump for transferring a transfer solution; ,

a sample introduction section;

a separation column for separating a sample; and

a detector for detecting the sample eluted from the separation column,

10 wherein there is disposed a flow switching means having a first and second sampling loop for temporarily storing the solutions and comprising a flow passage from the first pump, a flow passage from the second pump and a flow passage from the sample introduction section, the flow passages being connected with
15 each other, and

wherein the flow switching means alternatively makes a first state where the second pump pushes out the solution in the second sample loop towards the sample introduction section, while transferring the solution from the first pump to the first
20 sampling loop, and makes a second state where the second pump pushes out the solution in the first sampling loop, while transferring the solution from the first sampling loop to the second sampling loop.

Claim 2. The separation analyzer according to claim

25 1, wherein the flow switching means has a discharge passage for

discharging the solution outside of the analyzer, the passage having a flow resistance equivalent to that of the separation column, and wherein the discharge passage is connected with the first sampling loop at the first state, and the second sampling
5 loop is communicatedconnected with the discharge passage.

Claim 3. The separation analyzer according to claim 1, wherein the first pump transfers the solution at a rate of a micro-litter level ($\mu\text{L}/\text{min.}$) and the second pump transfers the solution at a rate of a nano-litter level ($\text{nL} / \text{min.}$).

10 Claim 4. The separation analyzer according to claim 1, wherein a volume of each of the first and second sampling loops is about 1 micro-litter ($\mu\text{L}/\text{min.}$).

Claim 5. The separation analyzer according to claim 2, wherein the flow switching means comprises a first member
15 that comprises a connection port (1) to which the passage from the first pump is connected, a connection port (2) to which the passage from the second pump is connected, a connection port (3) to which the flow passage to the sample introduction section is connected, and a connection port (4) to which the discharge
20 passage is connected, and a second member having a flow switching passage for switching the first and second states, and
wherein the first and second sampling loops are formed in the first and second members.

25 Claim 6. The separation analyzer according to claim

1, wherein a third pump for transferring the solution at a rate of a micro-litter level (μ /min.), a mixer for mixing the eluted solution from the separation column and the solution transferred from the third pump, and a pipetting section for
5 pipetting the solution after the solutions are mixed by the mixer.

Claim 7. The separation analyzer according to claim 1, which further comprises a constant temperature oven for keeping the temperature of the analyzer constant.

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